



SURVEYOR-GENERAL OF THE AUSTRALIAN CAPITAL TERRITORY

GUIDELINE No.12

DATUM GROUND LEVEL

In the event of an inconsistency between these guidelines and any Act or Regulation, the Act or Regulation take precedence to the extent of the inconsistency.

1.0 DATUM GROUND LEVEL

Currently the various height restrictions of buildings are determined from the Natural Ground Level (NGL) which was previously defined within the Territory Plan as the ground level at the time of granting of the lease. This definition has proved to be problematic for a number of reasons and a more precise determination has now been introduced.

NGL has been replaced by Datum Ground Level (DGL) which is defined as:

Datum ground level means the level of the surface of the ground as defined in a field survey and authorised by a qualified surveyor at the time of operational acceptance for greenfield development or prior to any new earthworks having occurred after that time.

2.0 Qualified Surveyor

The determination of datum ground level need not be performed by a registered surveyor. However the datum ground level information may be made available to the public and therefore the surveyor or their employee will need to take responsibility for the results. Datum ground level surveys shall be undertaken by a registered or qualified surveyor. For this purpose a qualified surveyor is defined as follows:

A qualified surveyor is a person who is eligible to claim at least 100 points under the following criteria:

100 points = 4 years tertiary surveying study or Bachelors degree in surveying or Registered Surveyor (may not have a degree). Note: Work may be undertaken under the supervision of a registered surveyor in accordance with the Survey Practice Directions.

75 points = 3 years degree in surveying.

50 points = TAFE Diploma in surveying or 2 years full time studying surveying or 4 years part-time in surveying.

10 points = Each full year of full time employment as a surveyor or survey assistant.

3.0 Survey Standards for determining DGL

DGL surveys are to be on the Australian Height Datum (AHD 71).

The method of survey is at the surveyor's professional discretion and options include field survey (including GNSS RTK), LIDAR, and Aerial photography. Regardless of the method the following standards of accuracy must be achieved.

Required accuracy

All spot heights must be within +/- 100mm of their true value however greater accuracy should be achieved on clearly defined features such as roads, culverts etc.

It is expected that contours would normally be required. The contour interval required will depend upon the slope of the land however would rarely be greater than 0.5 metres. An interval of considerably less may be required on flat land. Generally speaking, the interval should be such that at least one contour intersects each block of land.

The accuracy of contours should be such that at least ninety (90) per cent of contours will be accurate to within half of the contour interval¹. For example within + or – 0.125 metres for a 0.25 metre contour interval.

Field surveys, including GNSS RTK, shall always connect to at least two bench marks with published AHD heights. The observed misclose between bench marks must be noted in field notes. If insufficient marks are available, or the misclose is, in the surveyor's professional judgement, excessive for the type of survey and nature of the benchmarks, the surveyor should contact the Office of the Surveyor-General for advice.

The bench marks used to determine DGL should be shown on the final plan together with their heights and a description of the survey method used.

4.0 Intellectual Property and public access to information

The value of determining DGL is to ensure there is a clear and widely accepted ground level for design and compliance purposes. As such, it is important that the DGL survey results are made public.

For simplicity, it is anticipated that DGL surveys would be made publicly available by providing web access to pdf map files.

¹ National Mapping Council of Australia. Standards of Map Accuracy. Second Edition December 1975.

5.0 CONTACTS:

Office of the Surveyor-General – Environment and Sustainable Development Directorate

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ESDD Surveyor's web site:

http://www.actpla.act.gov.au/tools_resources/maps_land_survey/surveying_data/surveyors_information

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Version No	Issue Date	Nature of Amendment
0.1	15/03/2012	Initial version for internal distribution
0.2	9/09/2013	Revised with internal feedback
0.3	21/10/2013	Revised with further internal feedback
0.4	22/10/2013	Revised with external feedback
0.5	14/11/2013	Revised with more internal feedback
1.0	18/11/2013	Initial release version